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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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WILMER CUTLER PICKERING HALE AND DORR LLP		
60 STATE STREET		
BOSTON, MA 02109		

EXAMINER	
SHAH, PARAS D	

ART UNIT	PAPER NUMBER
2626	

NOTIFICATION DATE	DELIVERY MODE
07/18/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

michael.mathewson@wilmerhale.com
teresa.carvalho@wilmerhale.com
tina.dougal@wilmerhale.com

Office Action Summary

Application No.

10/657,421

Applicant(s)

COHEN ET AL.

Examiner

Paras Shah

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to the Application filed on 05/29/2007. Claims 1-4 and 6-14 remain pending. The Applicants' amendment and remarks have been carefully considered, but they are not persuasive and do not place the claims in condition for allowance. Accordingly, this action has been made FINAL.

2. All previous objections and rejections directed to the Applicant's disclosure and claims not discussed in this Office Action have been withdrawn by the Examiner.

Change of Art Units

3. It should be noted that the Examiner has changed art units, which was formerly 2609. The Examiner's new art unit is 2626.

Response to Arguments

4. Applicant's arguments (pages 6-12) filed on 05/29/2007 with regard to claims 1-4 and 6-14 have been fully considered but they are not persuasive.

As to claims 1, 9, and 13, the Applicants argue that Lumelsky reference is missing more than recognized. Specifically, the Applicants argue that the Lumelsky reference does not apply prosodic parameters to the word synthesized from the same word from which parameters were extracted of a spoken word in order to generate a prosodic mimic. The Examiner traverses the arguments by citing the following sections from the Lumelsky reference. Lumelsky discloses a spoken utterance (see col. 8, lines 52-55), prosodic parameters being extracted from the spoken utterance (see col. 8,

Art Unit: 2626

lines 65-col. 9, lines 1-4), synthesizing the nominal word (see col. 9, lines 1-3 and col. 11, lines 65-66) (e.g. Since the system also receives a text input, the user's prosody parameters are extracted, the system synthesizes the same spoken text said by the narrator by using the text input), and then outputs a voice using the prosody characteristics (see col. 19, lines 60-63) (e.g. It is implied by the reference that the output is the same as the synthesized speech found by the system at the beginning, where the narrator inputs the voice and text.) Further, the Applicants argue that there is no speech recognition being done in the Lumelsky reference. Hence, the Examiner has cited another prior art found from the Applicant's IDS. Marasek *et al.* (EP 1 271 469) discloses the use of a speech recognition unit for the spoken utterance.

5. Applicant's arguments with respect to claims 1-4 and 6-14 have been considered but are moot in view of the new ground(s) of rejection.

Response to Amendment

6. Applicants' amendments filed on 05/29//2007 have been fully considered. The newly amended limitations in claims 1 and 9 necessitate new grounds of rejection. The prior art reference by Cameron (WO 02/097590) has been applied to teach the "handheld device" as found in [0061] (e.g. portable is synonymous to handheld).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2626

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1-3, 6-7, 9-10, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lumelsky (US 6,081,780, issued on 06/27/2000) in view of Marasek *et al.* (EP 1 271 469) in view of Meredith (US 5,796,916, issued on 08/18/1998) in view of Cameron (WO 02/097590 A, published on 12/05/2002).

As to claims 1, 9, and 13, Lumelsky discloses a method and system for speech synthesis comprising:

receiving a spoken utterance (see Abstract and Figure 2A element 107) (e.g. The latter reference represents the input microphone);

extracting one or more prosodic parameters (see col. 8, lines 64-67 and col. 9 lines 1-4, and col. 17, lines 25-31) (e.g. The latter reference is provided for the signal processor that analyzes the speech signal) from the spoken utterance;

synthesizing a nominal word (e.g. The applicant refers to the nominal word as synonymous to synthesized word) corresponding to the recognized word (see col. 13, lines 42-43); and

generating a prosodic mimic word using (see col. 16, lines 62-65) the nominal word (see col. 16, line 46) (e.g. It is inherent that speech consists of words) and the one or more prosodic parameters (see col. 16, lines 45-50). Further, Lumelsky discloses the use of software codes being executed by a processor for the steps described above (see col. 17, lines 17-25).

However, Lumelsky does not specifically disclose the alignment of the spoken utterance and the synthesized word.

Meredith does disclose the **alignment of the spoken utterance to the synthesized speech** (see Abstract).

It would have been obvious to one of ordinary skilled in the to art at the time the invention was made to have combined the speech synthesis for an utterance as presented by Lumelsky by the alignment of the utterance and the synthesized word presented by Meredith. The motivation to have combined the two references includes the improvement in intonation (see Meredith col. 3, lines 5-10).

Lumelsky and Meredith do not specifically disclose the system implemented on a handheld device.

Cameron does disclose the **speech synthesis implemented on a handheld device** ([0061] (e.g. portable is synonymous to handheld)).

It would have been obvious to one of ordinary skilled in the to art at the time the invention was made to have combined the speech synthesis for an utterance as presented by Lumelsky and Meredith by the implementation on a handheld device. The motivation to have combined the references in involves the compression of data from

Art Unit: 2626

spoken information for direct retrieval as well as other tasks are able to be performed (see Cameron [0061]).

Lumelsky and Meredith and Cameron do not specifically disclose the inclusion of a speech recognition engine for the spoken input.

Marasek *et al.* discloses the use of **speech recognition for the spoken utterance** (see [0014] and [0015]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the speech synthesis for an utterance as presented by Lumelsky and Meredith and Cameron by the use of speech recognition. The motivation to have combined the references allows the extraction of contextual features as well as speaker identification (see Marasek *et al.* [0013], [0014] and [0015]).

As to claim 2, Lumelsky discloses wherein the one or more prosodic parameters include pitch (see col. 13, line 62).

As to claim 3, Lumelsky discloses wherein the one or more prosodic parameters include timing (see col. 13, line 63) (e.g. It is inherent that duration includes timing).

As to claim 6, Meredith discloses comprising temporally (see col. 4, lines 37-53) (e.g. The reference indicates the use of intervals and a pitch point marking) aligning phones (see col. 3, line 5) (e.g. Phones are synonymous to phonetic symbols) of the spoken utterance and phones of the nominal word (see Abstract).

As to claim 7, Lumelsky discloses comprising converting the prosodic mimic word into a corresponding audio signal (see col. 13, line 28) (e.g. It is inherent that the signal is in audio since the synthetic version is played back in the headset).

As to claim 10, Marasek *et al.* discloses wherein the decoder comprises a speech recognition engine (see [0014] and [0015]).

As to claim 12, Lumelsky discloses comprising a storage device (see col. 17, line 22) including executable instructions (see col. 17, line 21) for speech analysis and processing (see col. 17, lines 17-20).

As to claim 4, Lumelsky and Meredith do not specifically disclose wherein the one or more prosodic parameters include energy. Cameron does disclose the one or more prosodic parameters (see page 29, line 2) include intensity (see page 29, line 2) (e.g. It is implied that energy is being considered since intensity is the energy density). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have combined the methods and system presented by Lumelsky and Meredith with the addition of a prosodic parameter, intensity, presented by Cameron. The motivation to have combined the references includes the increase in quality of the synthesized speech from the actual speech recorded (see page 29, line 3-5).

As to claims 8, 11, and 14, Lumelsky and Meredith do not specifically disclose the spoken utterance received by a telephone input device and the prosodic mimic word provided to a telephone output device. However, Cameron discloses the use of a portable telephone (see page 5, paragraph 5, line 4) input device (see page 5, paragraph 6, line 1) and the prosodic mimic word (synthesis and presentation of commands to the user) (see Abstract and page 18, paragraph 2, lines 1-8) is provided to a telephone output device (see page 5, paragraph 6, line 2). Further, Cameron discloses the use of a user interface (see Abstract) utilizing a mobile phone (see page 18, line 7 and page 5, paragraph 5, line 4) (e.g. It is inherent that a portable telephone encompasses a mobile telephone). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have combined the methods and system presented by Lumelsky and Meredith with the speech synthesis applied to a telephone. The motivation to have combined the references involves the suggestion by Lumelsky on a cellular telephony (see col. 21, line 26). Further, the implementation of speech synthesis methods on a mobile phone allows voice dialing and voice command recognition (see Cameron, page 2, paragraph 2).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paras Shah whose telephone number is (571)270-1650. The examiner can normally be reached on MON.-THURS. 7:30a.m.-4:00p.m. EST.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571)272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

P.S.

06/12/2007


PATRICK J. MONARD
SUPERVISORY PATENT EXAMINER